

### **Am ndm nts to th Sp cification**

The Examiner objected to the application because the word “discreet” should be “discrete.” Please replace the existing paragraph 0011 on pages 4 and 5 with paragraph 0011 below.

[0011] The present invention is illustrated by example and not limitation in the figures of the accompanying drawings, in which like references indicate similar elements and in which:

Figure 1 is a block diagram of an embodiment of an acousto-optical filter tunable bandpass filter aligned to facilitate multiple passes of an optical signal through the bandpass filter;

Figure 1b is an exemplary graph illustrating a transmission spectrum developed after a first pass through the tunable bandpass filter and the reduced transmission spectrum developed by the tunable bandpass filter after multiple passes through the tunable bandpass filter;

Figure 2 is a magnified view of an embodiment of the interaction region containing light absorbing material blocking various wavelengths of the optical signal in the core of the optical waveguide;

Figure 3 is a block diagram of an embodiment of an optical filter having two or more reflectors aligned to reflect the optical signal bi-directionally through the interaction region;

Figure 4 is a block diagram of an embodiment the two or more reflectors that are aligned to reflect the optical signal in a unidirectional path multiple times through the interaction region;

Figure 5 is a graph of an exemplary transmission spectrum of the an embodiment of the tunable bandpass filter;

Figure 6 is a block diagram of an embodiment or two or more reflectors aligned to reflect a portion of the optical signal between the reflectors multiple times;

Figure 7a is a block diagram of an embodiment of the acousto-optical tunable narrow band filter generating the amplitude and the frequency of an acoustic wave in order to control the attenuation on the corresponding optical center wavelength;

Figure 7b is a graph illustrating the transmission through the acousto-optic filter for a first acoustic wave having a first amplitude and a second acoustic wave having a second lesser amplitude generated by the acoustic wave exciter;

Figure 8a is a block diagram of an embodiment of multiple cascaded acoustic wave exciters transmitting multiple acoustic waves to shape the transmission response of the optical signal passed through the bandpass filter;

Figure 8b is a graph of multiple acoustic waves each having discrete amplitudes and ~~discrete~~discrete frequencies applied to the cascaded interaction region to shape the transmission response of an optical signal passing through the cascaded interaction regions;

Figure 8c is a graph of an exemplary transmission spectrum shaped by the application of the multiple acoustic waves;

Figure 9 is a graph of an exemplary narrow band transmission spectrum such as 1555 nm, shaped by a control component synchronizing the application of multiple acoustic waves; and

Figure 10 is a block diagram of an embodiment of an optical monitoring device using an embodiment of the tunable bandpass filter.

Please replace the existing paragraph 0041 on page 18 with paragraph 0041 below.

[0041] Figure 8b is a graph of multiple acoustic waves each having discrete amplitudes and ~~discreet~~discrete frequencies applied to the cascaded interaction region to shape the transmission response of an optical signal passing through the cascaded interaction regions. Each acoustic wave at its own frequency corresponds to particular center wavelength in the optical signal such as a first center optical wavelength **810**, a second center optical wavelength **812**, a third center optical wavelength **814**, a fourth center optical wavelength **816**, and a fifth center optical wavelength **818**.

Please replace the existing paragraph 0048 on page 20 and 21 with paragraph 0048 below.

[0048] Optical monitoring device **1002** uses an embodiment of the tunable bandpass filter to obtain a precise representation of ~~discreet~~discrete wavelengths, such as 1555 nm, within a narrow band of wavelengths, such as 1550 nm to 1560nm, in order to determine optical characteristics of the particular wavelength. The control component may then sweep the narrow band of wavelengths to determine the optical characteristics for each discrete wavelength within that narrow band. Once those optical characteristics have been determined, then the optical monitoring device **1002** may provide feedback to first gain block **1006** in order to correct any of those

characteristic deviating from their desired set point. The optical monitoring device **1002** may determine the characteristics of the wavelength in a given range of wavelength such as 1530 nm to 1560 nm in order to provide feedback to flatten the gain within that range of wavelengths.